

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



United States
Environmental Protection
Agency

Office of Pesticide Programs

Antimicrobials Division (AD)
October 31, 2013

DP BARCODE(s): **412510**

MRID(s) : **49128801, 49128802**

SUBJECT:
(Name of Product) **Compass THPS**

FILE SYMBOL: **87262-U**

DOCUMENT TYPE: Product Chemistry Review of New Product

PRODUCT TYPE: Non-Food, Manufacture Use

INGREDIENTS:

PC Code	CAS #	Ingredient Name
129058	55566-30-8	Tetrakis(hydroxymethyl)phosphonium sulphate (THPS)

TEST LAB: Enviro Tech Chemical Services

SUBMITTER: Compass Chemical International LLC

GUIDELINE: OCSPP 830 Guidelines – Product chemistry Parts A and B

ORGANIZATION: AD\PSB\CTT

REVIEWER: Earl Goad

APPROVED BY: Karen P. Hicks

DATE APPROVED: October 31, 2013

COMMENT:

Handwritten: PCH 11/1/2013
Signature: [Signature]

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MEMORANDUM

SUBJECT: Product Chemistry Review for EPA File Symbol **87262-U**
Product Name: **Compass THPS**
DP Barcode(s): **412510**

CODE: (A532) Unregistered Source of Active Ingredient, Cite-All Data


DATE DUE: November 12, 2013

FROM: Earl Goad, Biologist
Chemistry and Toxicology Team
Product Science Branch
Antimicrobials Division (7510P)

THRU: Karen Hicks, Team Leader
Chemistry and Toxicology Team
Product Science Branch
Antimicrobials Division (7510P)

TO: Marshall Swindell PM#33/Zebora Johnson
Regulatory Management Branch I
Antimicrobials Division (7510P)

Applicant: Compass Chemical International LLC



PRODUCT FORMULATION FROM PROPOSED LABEL:

<u>Active Ingredient(s):</u>	<u>% by wt.</u>
Tetrakis(hydroxymethyl)phosphonium sulphate (THPS)	76
<u>Other Ingredient(s):</u>	<u>24</u>
Total:	100

BACKGROUND:

Compass Chemical International, LLC has submitted a pesticide registration application for their proposed product: EPA File Symbol 87262-U "Compass THPS". The registrant submits their registration using "cite-all". The product is formulated using a source of the active ingredient which is not EPA registered.

This product is a non-food end use product labeled for use as a biocide to treat industrial water systems and other water uses. It is also used as a preservative to be included in coatings, pigments, slurries and emulsions into various materials as a materials preservative. The product chemistry data package consists of the following:

1. Cover and Transmittal from Compass Chemical International dated May 14, 2013.
2. Product Specific and Generic Data Matrix dated May 14, 2013.
3. Proposed product Label Pin-punched
4. Original basic (post reaction) CSF dated May 8, 2013.
5. Updated revised basic (post reaction) CSF dated July 12, 2013
6. Two Product Chemistry Study Documents.

<u>MRID</u>	<u>Citation</u>	<u>Receipt Date</u>
49128801	Howarth, J. (2013) Compass THPS: Tetrakis (Hydroxymethyl) Phosphonium Sulfate: Product Identity and Composition and Analysis (Group A). Project Number: THPS/13/01. Unpublished study prepared by Enviro Tech Chemical Services, Inc. 37p.	16-May-2013
49128802	Howarth, J. (2013) Compass THPS: Tetrakis (Hydroxymethyl) Phosphonium Sulfate: Physical & Chemical Properties (Group B). Project Number: THPS/13/01. Unpublished study prepared by Enviro Tech Chemical Services, Inc. 12p.	16-May-2013

FINDINGS:

1. Confidential Statement of Formula.

The revised basic (post reaction) CSF dated July 12, 2013 is found to be acceptable.

2. Product Label

The proposed product label pin-punched May 16, 2013 appears to be accurate.

3. Product Chemistry Groups A and B

- a. Product Chemistry Group A (Product Identity and Composition) was found to be acceptable.
- b. Product Chemistry Group B (Physical and Chemical Properties) all data requirements have been completely satisfied with the exception to the one year storage stability and corrosion characteristics studies.

The storage stability study was described as being underway. Data was submitted for storage at room temperature conditions (70.5 and 66.°F). The starting concentration of active was 79.8% wgt and a one month concentration of 77.6%wgt. There does not appear to be an initial instability of the active ingredient in the product. The results of the completed study must be submitted to the Agency upon completion.

CONCLUSION:

The basic (post reaction) Confidential Statement of Formula dated July 12, 2013 and the label pin-punched May 16, 2013 are acceptable. Product chemistry studies submitted to address the data requirements are also found acceptable. Preliminary data was submitted for the one year product storage stability and corrosion characteristics studies. Upon completion results must be submitted to the Agency for review.

PRODUCT CHEMISTRY REVIEW

I. CONFIDENTIAL STATEMENT OF FORMULA

a. Type of formulation and source registration:

- | | | |
|-------------------------------------|---------|--------|
| • Non-integrated formulation system | Yes [] | No [X] |
| • Are all TGAs used registered? | Yes [] | No [X] |
| • Integrated formulation system | Yes [X] | No [] |

b. Clearance of inert ingredients for non-food or food use:

The product is non-cleared for food use under 40 CFR §§180.940 and 180.950.

Yes [] No [x]

Note: This product is not intended for food use. All inert ingredients have PC codes. All formulation components are listed on the EPA document "Inert Ingredients Permitted for Use in Nonfood Use Pesticide Products," available at http://www.epa.gov/opprd001/inerts/inert_nonfooduse.pdf.

c. Physical state of product:

Liquid

d. The chemical IDs and analytical information (including that for the TGAs), density, pH, and flammability are consistent with that given in 830 Series, Group B.

Yes [X] No []

e. Nominal and Certified Limits:

Note: EPA standard certified limits.

f. Active ingredients

<u>Active Ingredient</u>	<u>Nominal%</u>	<u>Lower CL%</u>	<u>Upper CL %</u>
Silver * as elemental	76	73.72	78.28

g. For products produced by an integrated formulation system

- Do all impurities of toxicological significance have a UCL?
Yes [X] No [] Not applicable []
- Have all impurities of $\geq 0.1\%$ in the product been identified?
Yes [X] No [] Not applicable [X]

II PRODUCT LABEL

a. The active ingredients statement (chemical IDs and NC) is consistent with the CONFIDENTIAL STATEMENT OF FORMULA. Yes [] No [S]

b. The formula contains one of the following:

- | | | |
|--|---------|--------|
| • 10% or more of a petroleum distillate: | Yes [] | No [X] |
| • 1.0% or more of methyl alcohol: | Yes [] | No [X] |
| • sodium nitrite at any level: | Yes [] | No [X] |
| • a toxic List 1 inert at any level: | Yes [] | No [X] |
| • arsenic in any form: | Yes [] | No [X] |

c. If "yes" to any of the above, does the inert ingredients statement contain a footnote indicating this?

Yes [] No [] Not applicable [X]

d. Appropriate warning statement(s) regarding flammability or explosive characteristics of the product are listed on the label.

Yes [] No [] Not applicable [X]

e. The storage and disposal instructions for the pesticide container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses.

Yes [] No [] Not applicable [X]

f. The product requires an expiration date at which time the NC falls below the LCL (based on the 1-year storage stability data or other information).

Yes [x] No []

Table A:
Product Chemistry (Series 830, Group A)

Data Requirements	Acceptance of Information	MRID No.
830.1550 Product Identity ¹	A-	49128801 CSF
830.1600 Description of Materials	A	49128801
830.1620 Production Process ²	A	49128801
830.1650 Formulation Process	NA	
830.1670 Formation of Impurities ⁴	A -	49128801
830.1700 Preliminary Analysis ⁵	A – Certificates of analysis of one lot for each of the starting materials. First production lots were analyzed and are found to be acceptable.	49128801
830.1750 Certified Limits ⁶	A – EPA Standard certified limits A- A signed certification statement was provided, as requested under OPPTS 830.1750(g).	49128801and CSF
830.1800 Enforcement Analytical Method ⁷	A – Titration.	49128801,
830.1900 Submittal of Samples	<i>[Samples are to be provided on a case-by-case basis for end-use products.]</i>	

Explanation: A=acceptable; N=not acceptable (i.e., item was submitted but is not acceptable);
NA=technically not applicable (i.e., not required); G=data gap (i.e., item was not submitted but is required);
U=requires upgrading (i.e., item is unacceptable but upgradeable); W=waived; E=EPA estimate.

Table B:
Physical and Chemical Characteristics (Series 830, Group B)

Physical/Chemical Properties*	Acceptance of Data	Value or Qualitative Description	MRID No.
830.6302 Color	A	Colorless	49128802,
830.6303 Physical State	A	Liquid at 20 C	49128802,
830.6304 Odor	A	Medicinal/slight garlic-like	49128802,
830.6313 Stability to Normal and Elevated Temperatures, Metals, and Metal Ions	NA	<i>[Not required for end-use products.]</i>	
830.6314 Oxidation/Reduction; Chemical Incompatibility	N		49128802
830.6315 Flammability/Flame Extension	A	Not combustible	49128802
830.6316 Explodability	NA	Product has no constituents with chemical bonds or functional groups associated with explodable chemicals	49128802
830.6317 Storage Stability	G	One year study in progress one month interim report. Concentration within certified limits	49128802
830.6319 Miscibility ¹	A	Not an emulsifiable liquid, intended to be used in aqueous systems.	49128802
830.6320 Corrosion Characteristics	G	Study is underway. One month preliminary data indicates sample appears unchanged.	49128802
830.6321 Dielectric Breakdown Voltage	A	The end use product is not intended for use in or around electrical equipment.	
830.7000 pH ²	N	Solution pH 4.61 at 21.4 C	49128802
830.7050 UV/Visible Absorption	NR	<i>[Not required for end-use products.]</i>	
830.7100 Viscosity	NA	Solid powder	49128802
830.7200 Melting Point/Melting Range	NR	<i>[Not required for end-use products.]</i>	
830.7220 Boiling Point/Boiling Range	NR	<i>[Not required for end-use products.]</i>	
830.7300 Density/Relative Density/Bulk Density	N	1.391 g/cm ³	49128802

Physical/Chemical Properties*	Acceptance of Data	Value or Qualitative Description	MRID No.
830.7370 Dissociation Constants in Water	NR	<i>[Not required for end-use products.]</i>	
830.7520 Particle size, fiber length, and diameter distribution.	NA	Product is a liquid.	49128802
830.7550/830.7560/830.7570 Partition Coefficient	NR	<i>[Not required for end-use products.]</i>	
830.7840/830.7860 Water Solubility	NR	<i>[Not required for end-use products.]</i>	
830.7950 Vapor Pressure	NR	<i>[Not required for end-use products.]</i>	

Explanation: A=acceptable; N=not acceptable (i.e., item was submitted but is not acceptable); NA=technically not applicable (i.e., not required); G=data gap (i.e., item was not submitted but is required); U=requires upgrading (i.e., item is unacceptable but upgradeable); W=waived; E=EPA estimate.

* Provide brief description, e.g., color – yellow or property value, e.g., density 1.25 g/cc. Unless otherwise indicated, the property should be at 25°C.

¹If product is an emulsifiable liquid

²If product is dispersible with water